

**In the Claims:**

The claims are as follows:

1. (Previously presented) An electronic structure, comprising:

an internally circuitized substrate having a metallic plane on a first surface of the substrate; and

a redistribution structure having N dielectric layers denoted as dielectric layers 1, 2, ..., N, N metal planes denoted as metal planes 1, 2, ..., N, and a microvia structure through the N dielectric layers, wherein N is at least 2, wherein dielectric layer 1 is on the first surface of the substrate and on the metallic plane, wherein metal plane J is on dielectric layer J for J = 1, 2, ..., N, wherein dielectric layer I is on dielectric layer I-1 and on metal plane I-1 for I = 2, ..., N, and wherein the microvia structure electrically couples metal plane N to the metallic plane, wherein the microvia structure includes at least one microvia, and wherein each microvia of the at least one microvia is a blind via having an outer wall surface and an end surface with an electrically conductive plating on the outer wall surface and on the end surface such that the electrically conductive plating includes a continuous distribution of electrically conductive material on the outer wall surface along an entire perimeter of the blind via, wherein the N dielectric layers each include a dielectric material having a stiffness of at least about 700,000 psi.

2. (Previously presented) The electronic structure of claim 1, wherein the at least one microvia includes N microvias denoted as microvias 1, 2, ..., N, wherein the microvia K passes through

dielectric layer K for  $K = 1, 2, \dots, N$ , wherein metal plane N is electrically coupled to microvia N, wherein metal plane J-1 electrically couples microvia J to microvia J-1 for  $J = 2, 3, \dots, N$ , and wherein microvia 1 is electrically coupled to the metallic plane.

3. (Previously presented) The electronic structure of claim 1, wherein the at least one microvia includes a microvia that passes through the N dielectric layers, wherein the microvia electrically couples metal plane N to the metallic plane.

4. (Previously presented) An electronic structure, comprising:

an internally circuitized substrate having a metallic plane on a first surface of the substrate; and

a redistribution structure having N dielectric layers denoted as dielectric layers 1, 2, ..., N, N metal planes denoted as metal planes 1, 2, ..., N, and a microvia structure through the N dielectric layers, wherein N is at least 2, wherein dielectric layer 1 is on the first surface of the substrate and on the metallic plane, wherein metal plane J is on dielectric layer J for  $J = 1, 2, \dots, N$ , wherein dielectric layer I is on dielectric layer I-1 and on metal plane I-1 for  $I = 2, \dots, N$ , and wherein the microvia structure electrically couples metal plane N to the metallic plane, wherein the microvia structure includes at least one microvia, and wherein each microvia of the at least one microvia is a blind via having an outer wall surface and an end surface with an electrically conductive plating on the outer wall surface and on the end surface such that the electrically conductive plating includes a continuous distribution of electrically conductive material on the outer wall surface along an entire perimeter of the blind via, wherein the at least one microvia

includes a first microvia, wherein the first microvia passes through dielectric layers M through N, wherein M is at least 2, wherein N is at least 3, wherein M is less than N, and wherein metal plane N is electrically coupled to the first microvia.

5. (Previously presented) The electronic structure of claim 4, wherein the at least one microvia further includes a second microvia that passes through dielectric layers 1 through M-1, wherein metal plane M-1 electrically couples the first microvia to the second microvia, and wherein the second microvia is electrically coupled to the metallic plane.

6. (Previously presented) The electronic structure of claim 4, wherein the at least one microvia further includes M-1 second microvias denoted as second microvias 1, 2, ..., M-1, and wherein the second microvia K passes through dielectric layer K for  $K = 1, 2, \dots, M-1$ , wherein the metal plane M-1 electrically couples the first microvia to second microvia M-1, wherein if  $M > 2$  then metal plane J-1 electrically couples second microvia J to second microvia J-1 for  $J = 2, 3, \dots, M-1$ , and wherein second microvia 1 is electrically coupled to the metallic plane.

7. (Original) The electronic structure of claim 1, wherein  $N = 2$  or  $N = 3$ .

8. (Canceled)

9. (Previously presented) The electronic structure of claim 1, wherein the dielectric material has a glass transition temperature of at least about 150 °C.

10. (Previously presented) The electronic structure of claim 1, wherein dielectric material has a coefficient of thermal expansion of no more than about 50 ppm/ $^{\circ}$ C.

11. (Original) The electronic structure of claim 1, wherein at least one of the metallic plane and the N metal planes includes a signal plane.

12. (Original) The electronic structure of claim 1, wherein at least one of the N metal planes includes a power plane.

13. (Original) The electronic structure of claim 1, wherein at least one of the N metal planes includes a ground plane.

14. (Previously presented) The electronic structure of claim 1, wherein the substrate includes a first dielectric material comprising a polytetrafluoroethylene (PTFE) having silicon particles therein.

15. (Previously presented) The electronic structure of claim 14, wherein the substrate further includes a ground plane, a power plane, and a signal plane, wherein the ground plane, the power plane, and the signal plane are each embedded within the first dielectric material, and wherein the signal plane is disposed between the ground plane and the power plane.

16. (Previously presented) The electronic structure of claim 14, wherein the substrate further

includes a ground plane, first and second power planes, and first and second signal planes, wherein the ground plane, the first and second power planes, and the first and second signal planes are each embedded within the first dielectric material, wherein the first signal plane is disposed between the ground plane and the first power plane, and wherein the second signal plane is disposed between the ground plane and the second power plane.

17. (Previously presented) The electronic structure of claim 1, further comprising an electronic device electrically coupled to the metal plane N by solder members.

18. (Original) The electronic structure of claim 17, wherein the electronic device includes a semiconductor chip.

19. (Previously presented) The electronic structure of claim 17, wherein the electronic structure includes at least one power plane, and wherein a thickness of the redistribution structure is large enough that a nearest distance between the solder member and any power plane of the at least one power plane is not less than a predetermined minimum distance value.

20. (Original) The electronic structure of claim 19, wherein the predetermined minimum distance value is predetermined by requirements of a given radio frequency application.

21. (Original) The electronic structure of claim 1, wherein a plated through hole (PTH) passes through the substrate from the first surface to a second surface of the substrate, and wherein the

metallic plane is electrically coupled to the PTH.

22. (Previously presented) The electronic structure of claim 21, further comprising a second metallic plane on the second surface of the substrate and a second redistribution structure having  $P$  second dielectric layers denoted as second dielectric layers 1, 2, ...,  $P$ ,  $P$  second metal planes denoted as second metal planes 1, 2, ...,  $P$ , and a second microvia structure through the  $P$  second dielectric layers, wherein  $P$  is at least 1, wherein second dielectric layer 1 is on the second surface of the substrate and on the second metallic plane, wherein second metal plane  $J$  is on second dielectric layer  $J$  for  $J = 1, 2, \dots, P$ , wherein if  $I > 1$  then second dielectric layer  $I$  is on second dielectric layer  $I-1$  and on second metal plane  $I-1$  for  $I = 2, \dots, P$ , wherein the second microvia structure electrically couples the second metal plane  $P$  to the second metallic plane, and wherein the second metallic plane is electrically coupled to the PTH, wherein the second microvia structure includes one or more microvias, and wherein each microvia of the one or more microvias is a blind via having an outer wall surface and an end surface with an electrically conductive plating on the outer wall surface and on the end surface such that the electrically conductive plating includes a continuous distribution of electrically conductive material on the outer wall surface along an entire perimeter of the blind via.

23. (Original) The electronic structure of claim 22, wherein  $P = N$ .

24. (Previously presented) The electronic structure of claim 22, further comprising an electronic board electrically coupled to the second metal plane  $N$  by solder members.

25. (Original) The electronic structure of claim 24, wherein the electronic board includes a circuit card.

26-50. (Canceled)

51. (Previously presented) The electronic structure of claim 1, wherein the electrically conductive plating on the outer surface of each blind via of the at least one microvia is a metal plating.

52. (Previously presented) The electronic structure of claim 51, wherein the electrically conductive material is copper.

53. (Previously presented) The electronic structure of claim 1, wherein a microvia of the at least one microvia includes the dielectric material.

54. (Previously presented) The electronic structure of claim 4, further comprising a semiconductor chip electrically coupled to the metal plane N by solder members, wherein a portion of a first solder member of the solder members is within the first microvia and is electrically coupled to the first microvia.

55. (Previously presented) The electronic structure of claim 54, wherein the first solder member is a controlled collapse chip connection (C4) solder ball.

56. (Previously presented) The electronic structure of claim 55, wherein the N dielectric layers each include a dielectric material having a stiffness of at least about 700,000 psi

57. (Previously presented) The electronic structure of claim 56, wherein a microvia of the at least one microvia includes the dielectric material.

58. (Previously presented) The electronic structure of claim 4, wherein the N dielectric layers each include a dielectric material having a stiffness of at least about 700,000 psi

59. (Previously presented) The electronic structure of claim 58, wherein a microvia of the at least one microvia includes the dielectric material.

60. (Previously presented) The electronic structure of claim 18, further comprising a chip carrier that includes the internally circuitized substrate.

61. (Previously presented) The electronic structure of claim 60, wherein the solder members comprise controlled collapse chip connection (C4) solder balls.

62. (Previously presented) The electronic structure of claim 25, wherein the solder members comprise ball grid array (BGA) solder balls.